



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/375,120	08/16/1999	DANIEL B. REENTS	2000.012600	4618

23720 7590 08/02/2004

WILLIAMS, MORGAN & AMERSON, P.C.
10333 RICHMOND, SUITE 1100
HOUSTON, TX 77042

EXAMINER

CHASE, SHELLY A

ART UNIT	PAPER NUMBER
----------	--------------

2133

DATE MAILED: 08/02/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/375,120

Applicant(s)

REENTS ET AL.

Examiner

Shelly A Chase

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 37-41 is/are rejected.
- 7) ☒ Claim(s) 8-36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. Claims 1 to 41 are presented for examination.

Information Disclosure Statement

2. The references listed in the information disclosure statement submitted on 9-25-2000 have been considered by examiner (see attached PTO-1449).

Drawings

3. The drawings are objected to because of the problems addressed in the attached PTO-948.

Claim Objections

4. Claim 37 is objected to because of the following informalities: please remove "of" or "for" in line 1. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2133

I) claim 4, recites the limitation "wherein said computer peripheral device" recited in line 1. There is insufficient antecedent basis for this limitation in the claim. If claim 4 should depend on claim 3 then the 112 second paragraph rejection is moot.

II) claim 6, recites the limitation "said universal serial bus host" recited in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims **1** to **7** and **37** to **41** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick (USP 5958027) in view of Martin et al. (USP 6021129).

Claim **1**:

Gulick substantially teaches the claimed invention. Gulick teaches a computer system optimizing the flow of data and clock rate information, comprising: a USB host [1504] ("frame tracking unit") receiving data from a data producer [1502], sending data to a USB function [1418] while monitoring the level of the buffer for overflows ("frame error") and issuing a clock lead/lag signal to increase or decrease the clock rate based on the received lead/lag signal. Gulick does not specifically teach automatically adjusting a data rate if a frame error is detected; however, Martin in an analogous art teaches a

Art Unit: 2133

system communicating information from a network to a host comprising a modem including a communication manager [50] and a controller [40] with a rate control module [142] adjusting the transmission rate for the transferred cells as required or when a delay is detected.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify adjusting the clock rate of Gulick by incorporating a rate control module for adjusting the transmission rate as taught by Martin. This modification would have been obvious because a person of ordinary skill in the art would have been motivated to employ a device for reducing the latency in data transmission by automatically adjusting the transmission rate.

As per claim 2, Gulick teaches the USB host sends and receives USP packets (see col. 3, lines 35 to 40).

As per claim 3, Gulick teaches that the USB host receives data from a data producer ("computer peripheral device"), tracks a buffer and transmits the received data to a USB function (see col. 6, lines 52 et seq.).

As per claim 4, Gulick teaches that the data producer can be either a bus bridge device or a DSP (4, lines 20 to 25).

As per claim 5, Gulick does not specifically teach the frame tracking unit is capable of receiving a frame of data from a universal serial bus host and performing adaptive frame tracking; however, Martin teaches a system for communicating information between a host and a communication link via of a USB bus [14] wherein the system includes a modem [16] receiving the information and monitoring the

Art Unit: 2133

transmission rate via of a controller [4] and a communication manager [50] (see col. 7, lines 63 et seq.). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify monitoring data received from a data producer of Gulick to include monitoring data received from a USB host as taught by Martin. This modification would have been obvious because a person of ordinary skill in the art would have been motivated to employ a method of ensuring the synchronous communication by monitoring the USB host.

As per claims **6** and **7**, Gulick teaches a computer system [1400] including a USB host [1416] (see col. 3, lines 55 to 61), and a receiver issuing an error if the transmitted data packet is corrupt (see col. 2, lines 6 to 24).

Claims 37, 40 and 41:

Gulick substantially teaches the claimed invention. Gulick teaches that a USB host monitors downloads a block of data once every millisecond (see col. 7, lines 5 to 14) and the basic data transfer protocol includes a token packet, a data packet, and a handshake packet wherein the token packet includes the "start of frame" packet and the "start of frame" packet is sent by the host every 1 ms (see col. 1 lines 50 et seq.). Gulick also teaches the USP host monitors a buffer for overflows (see col. 7, lines 52 to 65).

Gulick further teaches that the basic data transfer includes a sync filed used by input circuitry for aligning input data (see col. 1 lines 55 to 56) and establishing handshake for the received data (see col. 2, lines 10 to 36); interpreted as " determining

Art Unit: 2133

whether at least one data packet is missing from a received data stream.” Gulick teaches monitoring the data rate and adjusting the data rate to prevent overflows (see col. 5, lines 10 to 24 and col. 7, lines 30 to 51); interpreted as “establishing a start of frame rate control for said data packet for said missing data packet.

Gulick does not specifically teach supporting an automatic rate control of said data packet; however, Martin in an analogous art teaches a system communicating information from a network to a host comprising a modem including a communication manager [50] and a controller [40] with a rate control module [142] adjusting the transmission rate for the transferred cells as required or when a delay is detected.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify adjusting the clock rate of Gulick by incorporating a rate control module for automatically adjusting the transmission rate as taught by Martin. This modification would have been obvious because a person of ordinary skill in the art would have been motivated to employ a device for reducing the latency in data transmission by automatically adjusting the transmission rate.

As per claim **38**, Gulick teaches communicating USB isochronous data flow (see col. 2, lines 50 to 55).

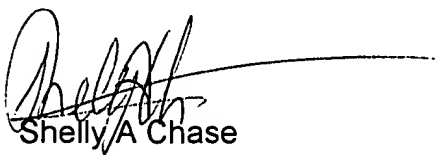
As per claim **39**, Gulick teaches the basic transfer for USB performs a CRC check of the data frame (see col. 2, lines 20 to 24).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelly A Chase whose telephone number is 703-308-7246. The examiner can normally be reached on Mon-Thur from 8:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Shelly A Chase